DCA13MR002
Conrail - Shared Assets
Derailment/Hazardous Material Release
Paulsboro, New Jersey
November 30, 2012

Hazardous Materials

Group Factual Report

ATTACHMENT 41 - CTEH AIR SAMPLING AND MONITORING WORK PLAN SUMMARY

CTEH® CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

Summary of CTEH® Air Sampling and Monitoring Work Plan

On November 30th, a train crossing over the East Jefferson Street Bridge derailed and released the chemical vinyl chloride into the environment. Shortly thereafter, the Center for Toxicology and Environmental Health (CTEH®), an air testing contractor for Conrail, began testing the air within Paulsboro, NJ and surrounding communities to ensure the health and safety of nearby residents.

Since the derailment, CTEH® has tested the air for vinyl chloride using a variety of air monitoring and air sampling methods. **Air monitoring** instruments instantly provide results to the scientist while in the field. This is similar to a "photograph" of the air quality. **Air sampling** involves collecting a sample of air throughout the day, sending it to a certified laboratory, and testing this air sample for vinyl chloride. Air sampling provides an average of the concentration of vinyl chloride in the air over a period of time.

CTEH® Air Monitoring

Scientists in the field use a hand-held survey meter, known as a MultiRAE, that can measure vinyl chloride as well as many other compounds (volatile organic compounds) that are sometimes found in the outdoor air. If this survey meter detects any compounds, a scientist in the field uses another instrument called a colorimetric tube that can specifically measure vinyl chloride. The scientist then records the results of these readings. As these scientific tools are small enough to carry and give instant results, these are referred to by CTEH® as 'real-time hand-held instruments'. These results from these readings are provided in the daily summary.

To further provide an assessment of vinyl chloride in the air, CTEH® utilizes additional survey meters at various places on the worksite and in the community. These stations, known as fixed AreaRAEs, send their data back to CTEH® site headquarters. Many factors, including temperature and humidity, can affect the accuracy of the survey meters. Therefore, if an AreaRAE station detects a chemical, a field scientist will go to the instrument and monitor for vinyl chloride utilizing a second survey meter and a chemical specific tube. The results from these AreaRAE stations are found in the daily summary.

CTEH® Air Sampling

CTEH® is also collecting samples of air at various locations within the community. The samples of air are collected in small silver cylinders and sent to a certified laboratory to be tested for vinyl chloride. This test sometimes takes a few days to complete but can detect vinyl chloride at very low levels in the

air. A summary of the air sampling data for which results have been received is found in a separate analytical summary.

MultiRAE

AreaRAE

Colorimetric Tube

Air Sampling Canister